

El Cont.
if NO acknowledgement corresponding to the access preamble is detected, transmitting a spread access preamble from the MS transmitter at a second discrete power level higher than the first discrete power level; and

upon detecting an acknowledgement corresponding to a transmitted access preamble, ceasing preamble transmission and transmitting packet data from the MS transmitter.

REMARKS

Applicants are filing the amendments above and the remarks that follow to address all issues raised in the June 5, 2002 Office, and thereby provide the requisite submission accompanying their Request for Continuing Examination (RCE). Applicants also filed a further Information Disclosure Statement on June 20, 2002, citing documents from a related European case; and Applicants request that the Examiner consider the documents cited in that Statement, and return an initialed copy of the PTO-1449 showing such consideration, as part of the continuing examination under the RCE.

Applicants have cancelled claim 50. Hence, claims 7, 9, 10, 12, 14, 15, 18, 20, 21, 24, 27, 29 and 33-49 should be active in this case.

Applicants note with appreciation that the Examiner has maintained the allowance of claims 7, 9, 10, 12, 14, 15, 18, 20, 21, 24, 27, 29 and 33-42.

Remaining claims 43-49 stand rejected on prior art grounds. Claims 47-49 have been amended to more clearly distinguish over the applied art. Claims 43-46, however, are believed to be patentable in their previously submitted form. A summary of the art rejections and detailed explanations of the patentability of pending claims 43-49 follow.

The Art Rejections

Claims 43, 44 and 46-48 stand rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent 5,841,768 to Ozluturk et al. (hereinafter the Ozluturk Patent). The Ozluturk Patent discloses a power ramp-up technique for use in the access phase of a wireless communication, implemented in a CDMA network, for example, for wireless telephone service. In one embodiment, the mobile station continuously repeats transmissions of an access code, at continuously increasing power levels (Fig. 5), until it receives an acknowledgement from the base station indicating receipt of the access code at a detectable power level. Attention is directed to column 6, lines 44-69. The second embodiment involves continuously repeating transmissions of a short code (column 7, lines 53-59) at a relatively fast power ramp-up (steep line in Fig. 7). After receiving an acknowledgement of the short code, the mobile station continuously repeats transmissions of a longer access code (column 8, lines 20-34) at a slower power ramp-up (lower slope line in Fig. 7), until the mobile station receives an acknowledgement of the access code from the base station (column 8, lines 55-63). The short code and the access code are known spreading codes (column 6, lines 4-9; and column 7, lines 28-35). The short code carries no data (column 7, lines 35-36), and apparently the access code carries no data.

Claim 45 stands rejected under 35 U.S.C. § 103 as obvious over the Ozluturk Patent. The Examiner acknowledges that the Ozluturk Patent does not disclose terminating preamble transmission after a maximum number of such transmissions. The rejection includes an allegation that imposing a time limit on access transmissions is well known and therefore it would have been obvious to impose a time limit by ceasing "power ramp codes" (presumably referring to the claimed preamble transmissions) after a maximum number of attempts.

These rejections are traversed, as discussed in detail below.

Patentability

Applicants respectfully submit that claims 43-46 and amended claims 47-49 are neither anticipated nor obvious over the Ozluturk Patent and therefore patentably distinguish over the art.

There are several features of the access methodology disclosed in this case that distinguish over the Ozluturk Patent, which are specified in different ones of the claims (47-49) that are still at issue in this case. For example, as disclosed in this case, each preamble transmission is at a discretely different power level. Application Fig. 6, shows examples of preamble transmissions at discretely different power levels P_0 through P_3 . Also, there is a separation or delay between preamble transmissions while the mobile station essentially listens for the acknowledgement. Application Fig. 6, shows examples of four preamble transmissions separated by pilot signal transmissions (aP), although there could be silence (no signal transmitted) in the intervening intervals (see application page 17, lines 17-22). The station sends the next preamble transmission only if the intervening period expires without receiving an appropriate acknowledgment. By comparison, Ozluturk teaches continuously repeating transmissions and a linear continuous power ramp-up. Continuous transmission and ramp-up does not provide preambles, each of which is completely at one of the different levels, or separations between preamble transmissions.

Another disclosed distinction is that the access preamble here is itself a form of code data (e.g. a signature) that is spread in essentially the same manner as other data. For example, Fig. 4 shows spreading of the preamble (see also p. 9, lines 12-20); and Fig. 3 shows the matched filter 315 de-spreading signals before processing for preamble recognition (see also p. 7, lines 15-20). Within one access burst the preambles may all be the same, or they may differ (see p. 13, lines 5-7). By comparison, Ozluturk teaches simply transmitting spreading codes without any data carried on

E

the short code or access code transmissions. Transmission of a spreading code only is not a transmission of a spread access preamble.

The modifications proposed in the obviousness rejections do not address any of these distinctions. It is respectfully submitted that each of claims 43-49 now specify one or more of these distinctions. The language of these claims and the specific differences over Ozluturk are discussed below.

Independent claims 43 and 44 specify transmission of each preamble at one "level." Stated another way, the entire first preamble transmission is at a one "first power level," and the entire second preamble transmission is at a one "second power level" (see e.g. claim 43, lines 10-15). Claim 44 specifies transmitting a preamble at a set power level and repeating the transmitting step at a new set level (lines 9-10 and 14-15). The second (or new set) power level is higher than the first power level (or increased). A continuous ramp-up extending through a preamble transmission, as in Ozluturk, would result in a preamble transmission that continues to increase (e.g. in an inclined linear manner) during the respective preamble transmission, not a complete transmission of a preamble at either "level," as claimed. Attention is directed to Figs. 5 and 7 of the Ozluturk Patent. The express claim language therefore excludes continuous power ramp up through one or more preamble transmissions, e.g. as a continuously increasing signal during each ongoing spreading code transmission, as is apparently the case in the Ozluturk system.

Also, claims 43 and 44 both expressly require retransmission upon lack of an acknowledgement within some time, "after" a preamble transmission. This express claim language requires some delay separating preamble transmissions. Such a claim requirement does not encompass the continuous transmissions taught by Ozluturk. Continuous transmission lacks some

E

time of separation "after" a preamble transmission, during which the station waits and listens for an acknowledgement.

Since the disclosure in the Ozluturk Patent fails to satisfy at least two express limitations of each of independent claims 43 and 44, Ozluturk does not anticipate those claims or the dependent claim 46. The anticipation rejection of claims 43, 44 and 46 therefore is improper and should be withdrawn.

Dependent claim 45 should be patentable for similar reasons, since the modification proposed in the obviousness (103) rejection over Ozluturk, does not provide either the respective power "level" transmissions or the period "after" a preamble transmission to await the acknowledgement before a further preamble transmission, as required by parent claim 44. The obviousness rejection of claim 45 therefore should also be withdrawn.

Claims 47 and 49 have been amended to more clearly point out certain distinctions over the art. Specifically, claims 47 and 49 expressly require that the power levels of the preamble transmissions are discretely different. These amended independent claims also require that the mobile transmission involves a spreading of an access preamble. As noted, Ozluturk uses a continuous ramp-up instead of discrete power levels. Also, the short code and the access code used by Ozluturk do not spread or carry any type of preamble (or any other form of data). Hence, Ozluturk also does not spread an "access preamble" as required by claims 47 and 49.

Since the disclosure in the Ozluturk Patent fails to satisfy at least two express limitations of each of independent claims 47 and 49, Ozluturk does not anticipate those claims or claim 48, which depends from 47. The anticipation rejection of claims 47-49 therefore is improper and should be withdrawn.

Applicants therefore submit that claims 43-49 define novel and unobvious subject matter.

Conclusions

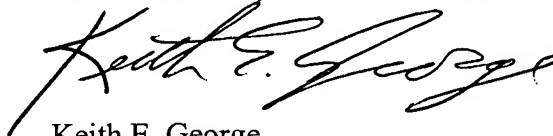
For the reasons outlined above, claims 43-49 patentably distinguish over the applied art and should now be in condition for allowance. The Examiner has allowed claims 7, 9, 10, 12, 14, 15, 18, 20, 21, 24, 27, 29 and 33-42. Hence, all claims pending in this application should be in allowable form. Prompt reconsideration of the case and issuance of a Notice of Allowability of all of the pending claims are earnestly solicited.

It is believed that the amendments and remarks above address all issues raised in the June 5, 2002 Office Action and place this case in condition for allowance. However, if any further issue should arise, which may be addressed in an interview or by an Examiner's amendment, Applicants request that the Examiner telephone their representative at the number shown below.

To the extent necessary, if any, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

MCDERMOTT, WILL & EMERY



Keith E. George
Registration No. 34,111

600 13th Street, N.W.
Washington, DC 20005-3096
(202) 756-8000 KEG:apr
Facsimile: (202) 756-8087
Date: August 6, 2002

E

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 47-49 were amended as follows:

47. (Amended) A method of transferring packet data for a mobile station (MS) with an MS receiver and an MS transmitter, comprising:

receiving at the MS receiver a broadcast common channel from a base station;

determining a plurality of parameters required for transmission to the base station;

spreading an access preamble selected from a set of predefined preambles;

transmitting from the MS transmitter [a first] the spread access preamble, [selected from a set of predefined preambles,] at a first discrete power level;

if NO acknowledgement corresponding to the [first] access preamble is detected, transmitting a [second] spread access preamble from the MS transmitter at a second discrete power level higher than the first discrete power level; and

upon detecting an acknowledgement corresponding to a transmitted access preamble, ceasing preamble transmission and transmitting the packet data from the MS transmitter.

48. (Amended) The method of claim 47, further comprising one or more additional steps of transmitting [an additional] a spread access preamble at a successively higher power if NO acknowledgement corresponding to any of the preamble transmissions is received, up to a maximum allowed number of preamble transmissions.

49. (Amended) A code-division-multiple-access (CDMA) wireless handset, comprising:
a CDMA transmitter;

a CDMA receiver; and

a controller coupled to the CDMA receiver for responding to signals received via the CDMA receiver and coupled for controlling the CDMA transmitter, such that in operation the CDMA handset is for performing the following steps:

spreading an access preamble selected from a set of predefined preambles;

transmitting [a first] the spread access preamble, [selected from a set of predefined preambles,] at a first discrete power level to a base station;

if NO acknowledgement corresponding to the [first] access preamble is detected, transmitting a [second] spread access preamble from the MS transmitter at a second discrete power level higher than the first discrete power level; and

upon detecting an acknowledgement corresponding to a transmitted access preamble, ceasing preamble transmission and transmitting [the] packet data from the MS transmitter.